

Seattle Green Roof Plant Lists and Soil Specs

This draft document gathers together plant lists and soil specs for several green roof projects in the Seattle area. It is intended to share current knowledge, and not as a definitive list. If you want to share a project plant list or soil specs that are appropriate for the Puget Sound region, please forward to david.mcdonald@seattle.gov

Seattle City Hall (completed fall 2003)

Soil Specs

2.3 ROOF GARDEN SOIL MIX

- A. Provide new commercial roof garden soil mix to conform to the following components.
- 55% - PermaTill 5/16" Expanded Slate or equal
 - 30% - USGA Root Zone Sand
 - 15% - Approved Compost

Plant List, for 13,000 sf.

SEATTLE CITY HALL
00661.00

SECTION 02901
ROOF GARDEN LANDSCAPING

2.3 PLANTS

- A. Quality: Provide plants of size, genus, species and variety specified for landscape work and complying with recommendations and requirements of ANSI Z60.1 "American Standard for Nursery Stock".
- B. Provide the following plants for roof garden beds:

QUANTITY	BOTANICAL NAME	SIZE	SPACING	REMARKS
8,440	Festuca brachyphylla, Pt. Joe Fescue	4" Pot	8" On Center	Flat Grown
8,440	Koeleria macranthe 'Barkol', June Grass	4" Pot	8" On Center	Flat Grown
1,400	Sedum reflexum	4" Pot	8" On Center	Flat Grown
1,400	Sedum spectabile 'Frosty Morn'	4" Pot	8" On Center	Flat Grown
1,400	Sedum spurium 'John Creech'	4" Pot	8" On Center	Flat Grown
1,400	Sedum 'Vera Jamieson'	4" Pot	8" On Center	Flat Grown

Plant quantities are based on rectangular spacing, offset rows and columns.

Plant species are to be randomly mixed with no less than 4'x4' per individual species grouping.

More about this project at

<http://www.ci.seattle.wa.us/sustainablebuilding/cityprojects.htm#Seattle%20City%20Hall> and
<http://www.greenroofs.com/projects/pview.php?id=310>

Ballard Branch, Seattle Public Libraries (completed Spring 2005)

- Date roof planted: Spring, 2005.
- Size, square feet: 18,000 s.f. of planted area.
- Slope: The roof is faceted and varies in pitch from 2.5:12 at the north end, to 1/2:12 at the low point, back up to 1.5:12 at the south end.
- Irrigation: There is drip irrigation at the north end only, for use as the plants establish themselves. Drought tolerant, hardy plant species were chosen for the roof to minimize maintenance and the need for irrigation.
- Growing medium depth: 5"
- Growing medium characteristics: A lightweight roof garden soil mixture was used.
- Generally, types of plants: Sedum's and Fescue's.
- For more on this project, see

http://www.spl.org/pdfs/branch/Ballard_environmental_features.pdf%20

- General information, including location (a great site to visit!) at http://www.spl.org/default.asp?pageID=branch_open_pageindex&branchID=3

Plant list:

<i>Achillea tomentosa</i>	Woolly yarrow
<i>Armeria maritima</i>	Sea pink, sea thrift
<i>Carex inops (pennsylvanica)</i>	Long-stoloned sedge
<i>Eriophyllum lanatum</i>	Oregon sunshine
<i>Festuca rubra</i>	Red creeping fescue
<i>Festuca idahoensis</i>	Idaho fescue
<i>Phlox subulata</i>	Creeping phlox
<i>Saxifrage cespitosa</i>	Tufted saxifrage
<i>Sedum oregonum</i>	Oregon stonecrop
<i>Sedum album</i>	White stonecrop
<i>Sedum spurium</i>	Two-row stonecrop
<i>Sisyrinchium idahoensis</i>	Blue-eyed grass
<i>Thymus serpyllum</i>	Thyme
<i>Triteleia hyacintha</i>	Fool's onion

Woodland Park Zoo, Seattle, "Zoomasium" Building (completed Spring 2006)

Green Roof, a vegetated roof system on the large curved upper roof (approximately 8000 Square Feet, measures 116' long and 69' wide, and slopes gradually along a 225' radius from 0:12 to 3:12 at the low edge on the east side of the roof). The added cost of the green roof and related structural requirements over a conventional roof was \$241,668.

The roof system is a total of 14 ½" thick. From top to bottom it is composed of:

- Plantings: 20,977 plants in all
 - Plant List
 - Salal
 - Sword Fern
 - Kinnikinnick
 - Nodding Wild Onion
 - Blue eyed grass flower
 - Western Polypody
 - Blue-Pod Lupine
 - Sand Strawberry
- Specially blended lightweight soil (40 lbs. per square foot when dry, 55 lbs. per square foot when wet) 6"
- Filter Fabric
- Reservoir Board - assists in drainage, and stabilizes the roof system ¾"
- Drainage Mat ¾"
- Monolithic Rubberized Asphalt Membrane (keeps the building dry) ½"
- Plywood (sealed seams) ½"
- Insulation 5 ½"

- Plywood (sealed seams) ½”
- Structure below

More information about this project at <http://zoo.org/zoomazium/discover.html>